EMERGENCY RESPONSE REPORT

FOR
EAST TEXAS AG SERVICES
105 WEST LARKIN STREET
ATHENS, HENDERSON COUNTY, TEXAS

Prepared for

U.S. Environmental Protection Agency Region 6
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PROJECT SUMMARY

This final report describes the U.S. Environmental Protection Agency (EPA) response actions for the East Texas Ag Services emergency response. The East Texas Ag Services facility is located at 105 West Larkin Street in Athens, Henderson County, Texas. The detailed report follows this page, and all attachments are provided as separate portable document format (PDF) files. On 29 May 2014, the National Response Center (NRC) was notified of a fire at the East Texas Ag Services fertilizer plant (NRC Report No. 1084341). According to the NRC Report, the fire began at approximately 1743 hours on 29 May 2014. The EPA Region 6 Prevention and Response Branch (EPA-PRB) was notified, and at approximately 2045 hours on 29 May 2014, EPA-PRB On-scene Coordinator (OSC) Mark Hayes notified Weston Solutions, Inc. (WESTON®), the EPA Region 6 Superfund Technical Assessment and Response Team (START-3) contractor. START-3 was instructed to provide air monitoring and assessment support. By 30 May 2014, the fire was extinguished. The EPA Team briefed EPA OSC Mark Hayes on site conditions and was released from the site on 30 May 2014. The EPA team continued to maintain communication with Texas Commission on Environmental Quality (TCEQ), the Texas State Chemist, and the Athens Fire Department to gather additional information related to the fire response and cleanup process.

This final report was prepared under Contract No. EP-W-06-042 for EPA Region 6. The EPA OSC was Mark Hayes, and the START-3 Project Team Leader (PTL) was Sean Gavlas.

☐ The EPA Task Monitor did not provide final approval of this report prior to the completion date of the work assignment. Therefore, Weston Solutions, Inc. has submitted this report absent the Task Monitor's approval.

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1. INTRODUCTION

At approximately 1740 hours on 29 May 2014, a fire originated at East Texas Ag Services fertilizer blending plant, located at 105 West Larkin Street in Athens, Henderson County, Texas. The National Response Center (NRC) was notified of the fire at approximately 2356 hours on 29 May 2014 (NRC Report No. 1084341). The U.S. Environmental Protection Agency (EPA) Region 6 Prevention and Response Branch (EPA-PRB) was notified by the NRC, and at approximately 2045 hours on 29 May 2014, EPA-PRB On-scene Coordinator (OSC) Mark Hayes activated Weston Solutions, Inc. (WESTON®), the EPA Region 6 Superfund Technical Assessment and Response Team (START-3) contractor under Contract No. EP-W-06-042. The Technical Direction Document (TDD) No. 1/WESTON-042-14-017 (Attachment M) instructed START-3 to respond to the incident by assisting with air monitoring activities and by providing photographic and written documentation of site operations.

Geographic coordinates of the site, Latitude 32.206450º North and Longitude 95.855828º West, were determined by START-3 members using the hand-held global positioning system (GPS) based on the World Geodetic System -1984 (WGS-84) with accuracy estimated at less than 25-feet circular probable error.

2. BACKGROUND

East Texas Ag Services Facility Description

East Texas Ag Services is a fertilizer blending and storage facility located in downtown Athens, Texas. The facility was a wood-framed building with cinderblock walls, situated on the north side of the Union Pacific Railroad tracks. Fertilizer components such as ammonium nitrate, diammonium phosphate (DAP), potassium magnesium (K-Mag), potash, and some non-combustible filler materials were delivered to the East Texas Ag Services facility via trucking service. Once at the facility, machinery was used to mechanically combine the fertilizer components to desired concentrations for agricultural purposes. According to information obtained from East Texas Ag Services (the potentially responsible party [PRP]) by Athens Fire Chief John McQueary, the facility had recently received a 70-ton shipment of ammonium nitrate prior to the fire. The area immediately surrounding East Texas Ag Services is zoned both commercial (restaurants and retailers) and residential (single-family homes). The closest

residence is approximately 450 feet west of the facility. The Site Location Map is included as Attachment A.

East Texas Ag Services Fire Description

According to Athens Fire Chief McQueary, the fire started at East Texas Ag Services at approximately 1740 hours on 29 May 2014, approximately 30 minutes after the PRP had reportedly left the facility. No other employees were inside the building when the fire started. Attachment C provides a Site Layout Map of the facility. Response actions were led by local authorities including the Athens Fire Department (AFD) and the Athens Police Department (APD), who were on-site within 3 minutes of receiving notification of the fire. In addition to the EPA, other responding regulatory agencies included the Texas State Fire Marshal's Office, Center for Toxicology and Environmental Health (CTEH), Office of the Texas State Chemist, Texas Commission on Environmental Quality (TCEQ), and the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF).

During an operations briefing with AFD Chief McQueary, it was reported that a 70-ton shipment of ammonium nitrate was delivered recently to the facility. Considering these conditions, AFD decided to let the fire burn out in a controlled manner overnight without the use of water. Once the fire crew was able to reassess the fire in daylight the following morning, it was concluded that it would be safe to use a light spraying of water to suppress the fire. The fire was extinguished at approximately 1150 hours on 30 May 2014. After the flames were extinguished, a fence was installed along the perimeter of the site to preserve the scene for investigation purposes. The material continued to smolder until approximately 1530 hours on 30 May 2014.

After an investigation of the origin of the fire, federal, state, and local fire officials ruled the cause of the fire to be undetermined. All agencies agreed that the only cause that could not be eliminated as the source of ignition was an electrical system malfunction. The source of the fire is classified as undetermined because the ignition source and the material initially ignited could not be established.

3. ACTIONS TAKEN

On 29 May 2014, the EPA team mobilized to the site, arriving at 0010 hours. The APD and the TCEQ Emergency Management Coordinator established an evacuation zone with a five block radius centered at the East Texas Ag Services facility. A local community center, Cain Center, accepted evacuees during the evacuation period. TCEQ and EPA divided the region surrounding the fire into $^1/_4$ by $^1/_8$ mile quadrants extending from the East Texas Ag Services facility to beyond the five block evacuation zone. In addition to the EPA team, TCEQ and CTEH contractors conducted air monitoring in each quadrant. The EPA team response activities consisted of providing written and photographic documentation of response activities and performing perimeter air monitoring using a calibrated AreaRAE, VRAE, and MultiRAE Pro.

Air Monitoring

On 30 May 2014, while the fire was active, the EPA team performed perimeter air monitoring in the designated quadrants surrounding the East Texas Ag Services facility using a calibrated AreaRAE, VRAE, and MultiRAE Pro (see Attachment D Air Monitoring Locations). A total of 25 locations were monitored using air monitors equipped with sensors capable of detecting oxygen (O_2), hydrogen sulfide (H_2S), carbon monoxide (CO), the lower explosive limit (LEL) as compared to methane, volatile organic carbons (VOCs), ammonia (NH_3), nitrogen oxide (NO), and nitrogen dioxide (NO_2). Each EPA monitoring location was recorded with hand-held GPS equipment. Results from air monitoring indicated no significant readings above the sensor detection limits during the 3-hour monitoring period from 0100 hours to 0400 hours. The monitoring results are summarized in Attachment F Periodic Air Monitoring Data. Simultaneous to the EPA team monitoring, TCEQ and CTEH environmental subcontractors conducted air monitoring for NO, NO_2, NH_3, chlorine (Cl_2), VOCs, and particulate matter (PM) throughout the evacuated area. The subcontractors reported no contaminants were detected above sensor detection limits.

After the fire was extinguished, the EPA team continued air monitoring in the vicinity of the fire until the materials in the facility stopped smoldering. A peak reading of 8 parts part million (ppm) NH_3 was detected approximately 40 feet downwind (west) of the facility at 1200 hours. No contaminants were detected above the sensor detection limits while air monitoring around the

perimeter of the facility, at adjacent commercial buildings, nearby residential areas, or at Railroad Park downwind of the facility. Air monitoring concluded at approximately 1600 hours on 30 May 2014.

Fire Water Sampling and Disposal

Union Pacific Railroad crews assisted by constructing soil containment berms along the northern edge of the facility in order to prevent migration of water used to suppress the fire. The EPA team monitored the berms to ensure that no runoff occurred.

The EPA team collected one sample of accumulated firefighting water at 1653 hours 30 May 2014 and submitted to a laboratory for waste profile analysis. Laboratory analysis performed on the sample includes potassium, nitrate nitrogen, nitrite nitrogen, ortho-phosphate as P, total phosphorous as P, and ammonia nitrogen. The laboratory analysis results were consistent with the fertilizer components on-site: potassium, nitrate, phosphorous, and ammonia nitrogen. The full results of the laboratory analysis are found in Attachment G.

On 30 May 2014 at approximately 1900 hours, the TCEQ subcontractor, SWS Environmental Services (SWS), arrived on-site and began recovering firefighting water, using a vacuum truck, which was then transferred to a frac tank. Over a 2 hour period, approximately 4,900 gallons of firefighting water was recovered from the bermed area and transferred to the frac tank. The frac tank was left on-site within the fenced area for use in fire investigation and pending waste characterization laboratory analysis for proper disposal. The pH of the firefighting water was approximately 5.

Demobilization and Follow Up

The fire was extinguished at approximately 1150 hours on 30 May 2014, and cleanup, investigation, and remediation activities were underway. At approximately 2220 hours on 30 May 2014, the EPA team was released from the site per EPA OSC Hayes. According to TCEQ, firefighting water was contained on-site throughout the investigation and then disposed as nonhazardous waste at Pine Hill Landfill in Longview, Texas, on 16 June 2014. The waste manifest is found in Attachment K.

The PRP proposed a work plan to dispose of the fertilizer components that remain on-site that was provided to the EPA team by the Texas State Chemist (see Attachment L PRP Cleanup Operations Plan). The plan involves hiring a contractor, Allied International Emergency (AIE), to mix fertilizer components and dispose of them at an approved waste disposal facility. AIE will also demolish the existing structure and send metals to a local recycler. As of 22 July 2014, the Office of the Texas State Chemist is overseeing the cleanup activities and reports that the removal of remaining fertilizer and building materials are not yet underway, and are pending the approval of Union Pacific Railroad. According to a representative from the Office of the Texas State Chemist, due to the facility's close proximity to the railroad tracks, Union Pacific Railroad is in the process of verifying that the contractor hired by the PRP possesses the proper training to complete the tasks on the PRP work plan.

This final report was prepared as part of the requirements of TDD No. TO-0001-42-14-017 and serves as documentation of work completed to date.

4. LIST OF ATTACHMENTS

A. Site Location Map
B. Site Area Map
C. Site Layout Map
D. Air Monitoring Locations
E. Digital Photographs
F. Periodic Air Monitoring Data
G. Analytical Results
H. NRC No 1084341
I. POLREPs
J. Site Logbook
K. TCEQ Waste Manifest
L. PRP Cleanup Operations Plan
M. TDD No. 1/WESTON-042-14-017